

CLASS SPECIFICATION

SAN DIEGO CITY CIVIL SERVICE COMMISSION

ASSOCIATE ENGINEER - CORROSION

DEFINITION:

Under direction, to plan, design and evaluate a corrosion prevention program for water and wastewater utilities systems; and to perform related work.

*** EXAMPLES OF DUTIES:**

- Plans, designs and evaluates corrosion prevention systems such as cathodic protection and protective coatings for water and wastewater pipelines, tanks, standpipes, reservoirs, pump stations and filtration plants;
- Prepares detailed engineering designs for corrosion prevention systems and develops specifications and bid documents;
- Determines location and size of cathodic protection systems, type of conduit for anode leads and design of rectifier and electrical current systems;
- Conducts soil tests to determine corrosive properties of soil in proposed locations of water and wastewater pipelines;
- Recommends composition of pipe based on soil tests;
- Investigates the effects of the cathodic protection systems on other underground utility systems and, when necessary, recommends the relocation of the systems;
- Evaluates corrosion prevention systems and makes recommendations on improvements;
- Selects, develops specifications and tests protective coatings;
- Conducts failure analyses of metal structures due to corrosion;
- Reviews new systems designs;
- Prepares technical engineering studies to determine the effect of electrical interference from other agencies' protection systems or other structures creating electrical currents near the City's systems;
- Maintains records and prepares reports regarding the corrosion prevention program;
- Recommends corrosion protective repair methods for facilities in need of repair;
- Manages consultant services for corrosion protection projects.

MINIMUM QUALIFICATIONS:

Please note: the minimum qualifications stated below are a guide for determining the education, training, experience, special skills, and/or license which may be required for employment in the class. These are re-evaluated each time the position is opened for recruitment. Please refer to the most recent Job Announcement for updated minimum qualifications.

College graduation with a Bachelor's degree in Corrosion, Chemical or Metallurgical Engineering, or closely related field, **OR** certification as an Engineer-in-Training, **OR** registration as a professional Corrosion, Chemical, or Metallurgical Engineer with a State Licensing Board; **AND** three years of professional corrosion engineering experience. Possession of a valid California Class C Driver's License.

- * **EXAMPLES OF DUTIES** performed by employees in this class. The list may not include all required duties, nor are all listed tasks necessarily performed by everyone in this class.